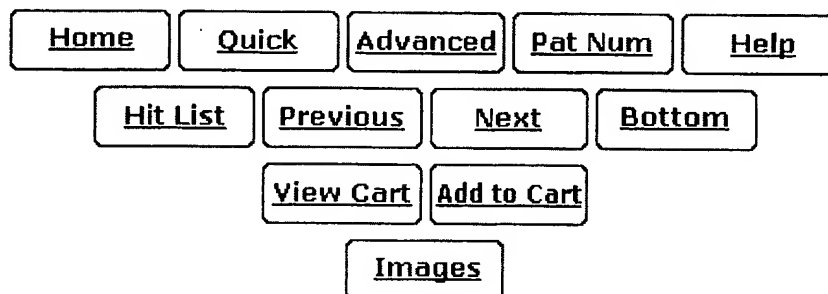


USPTO PATENT FULL-TEXT AND IMAGE DATABASE

(42 of 44)

United States Patent

5,106,950

Farina , et al.

* April 21, 1992

Polypeptide-labeled analyte analog for carrying out an immunoassay

Abstract

A polypeptide-labeled analyte analog for use in an immunoassay is prepared which is capable of binding with a polypeptide partner to provide enzymatic activity such as a ribonuclease or .beta.-galactosidase activity. The polypeptide analog provides a highly sensitive, immunoassay method for determining the amount of an analyte in a sample containing a known analyte in an unknown concentration. To carry out an immunoassay, there is brought together in a medium a sample, the polypeptide-labeled analog of the analyte, an antibody specific for said analyte, a polypeptide partner capable of non-covalently binding with the polypeptide-labeled analyte analog to form a complex having catalytic activity, and a substrate capable of being converted to a reporter molecule by the catalytic activity of said complex. The polypeptide-labeled analyte analog is capable of competitively binding to the antibody and the polypeptide partner, the antibody inhibiting the formation of a catalytically active complex in the absence of analyte, and the concentrations of the antibody, polypeptide partner and polypeptide-labeled analyte are such as to cause varying amounts of analyte to be directly related to the conversion of the substrate to the *reporter molecule*. Conversion of the substrate to the *reporter molecule* is then determined, and compared to conversions of substrate to reporter molecule obtained with known concentrations of the analyte.

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[*] Notice: The portion of the term of this patent subsequent to November 15, 2005 has been disclaimed.

Appl. No.: 214424

Filed: July 1, 1988

Current U.S. Class:

530/345; 435/7.4; 435/7.9; 435/183; 435/199; 435/207; 530/300;
530/323; 530/350; 530/389.2; 530/389.8; 530/402; 530/403;
530/404; 530/405; 530/406

Intern'l Class:

C07K 001/00; C07K 003/00; G01N 033/53; C12N 009/00